



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Where mind connects with matter

Citation for published version:

Flores, A, Tierney, I & Watt, C 2018, 'Where mind connects with matter: Replicating the correlation matrix method', 61st Annual International Convention of the Parapsychological Association, San Francisco, United States, 2/08/18 - 5/08/18 pp. 15.

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



WHERE MIND CONNECTS WITH MATTER: REPLICATING THE CORRELATION MATRIX METHOD¹

Ana B. Flores, Ian Tierney, & Caroline A. Watt
Koestler Parapsychology Unit, University of Edinburgh, Scotland, UK.

ABSTRACT

This article describes two experimental replications of a new methodological paradigm called Correlation Matrix Method (CMM) (Lucadou, 1987). The CMM was developed by Walter von Lucadou in an effort to offer a solution to the problems of replicability and decline effect in parapsychological experiments, namely in 'psychokinesis'. Supported by von Lucadou's Model of Pragmatic Information (MPI) and von Lucadou, Walach and Romer's (2007) Generalised Quantum Theory (GQT), the model correlates physical variables produced by a Markov-chain random number generator with psychological variables measured from the participant before the PK task.

The method claims that correlations produced between psychological and physical variables during the experimental session considered as statistically significant should be interpreted as non-local entanglement correlations.

The two experiments used the same method and were pre-registered at the KPU registry at the University of Edinburgh. Each experimental session took on average 20 to 30 minutes depending on the rhythm of the participant. Forty-four participants completed 213 sessions in the first experiment, and 105 participants contributed 200 sessions in the second experiment. In both experiments participants were asked to influence solely by intention, a physical target shown on a computer screen which was controlled by the output of the random number generator. The psychological data was derived from button presses to reflect the subject's intention as well to fulfil the CMM requirement of organisational closure, i.e. to maintain the participant interacting with the physical process so the experimental session is a whole structure.

As a control analysis, a permutation method was used to generate new correlations using data from each experimental variable separately. The permutation also cleanses dependencies between the existing variables. A non-parametric correlation coefficient, Spearman's Rho, was calculated across all subjects and sessions to calculate the number of significant correlations at $p < 0.05$.

In both experiments the number of significant correlations produced between participant influence and values produced by random number generator were very significantly more than the ones produced by the control method. Limitations in the method, and in the analyses are discussed, also suggestions for further experiments are explored.

¹ We are grateful to the Bial Foundation for supporting this research with grant number 117/16.